Listing of the Claims:

1. (Currently Amended) A method of deactivating biological or chemical agents in a large volume space with a convoluted configuration, the method comprising:

isolating the space;

introducing a deactivation gas concurrently into each of a plurality of subregions of the isolated space, which subregions are ~~physically~~ interconnected and open to each other in such a manner that air flows between the subregions;

circulating the deactivation gas within each subregion; [[and]]

circulating the deactivation gas from a subregion to its adjoining subregions;

sensing concentrations of the deactivation gas at a plurality of points around the isolated space;

based on the sensed concentrations, controlling the introducing of the deactivation gas, and the circulating of the deactivation gas from subregion to adjoining subregion such that the deactivation gas concentration in each of the subregions is maintained above a preselected minimum concentration and below a preselected maximum concentration; and,

continuing to introduce and circulate the deactivation gas until any biological or chemical agents in the space are deactivated.

2. (Currently Amended) The method according to ~~claim 1~~ claim 3, further including:

exhausting air, spent deactivation gas, and deactivation gas from the space; and,

trapping any entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas.

3. (Currently Amended) The method according to ~~claim 2 further including:~~ claim 1, wherein controlling the circulation of the decontamination gas from subregion to adjoining subregion includes controlling each of a plurality of

circulation fans which move the decontamination gas from one of the subregions to an adjoining subregion

~~sensing a concentration of the deactivation gas at a plurality of points around the isolated space; and,~~

~~controlling the introduction and circulation of the deactivation gas and the exhausting such that the deactivation gas concentration throughout the space is maintained above a preselected minimum concentration and below a preselected maximum concentration~~.

4. (Currently Amended) The method according to ~~claim 3~~ claim 1, further including:

sensing temperature at a plurality of locations around the space and in each of the subregions; and,

wherein the preselected maximum concentration in each subregion is a saturation or condensation concentration at the sensed temperature in the subregion.

5. (Currently Amended) The method according to ~~claim 3~~ claim 19, wherein ~~controlling the introduction and circulation of the deactivation agent includes~~ the fans are controlled to circulate the deactivation gas among the subregions and around the space using flow dynamics modeling.

6. (Currently Amended) The method according to ~~claim 3~~ claim 1, wherein the sensing includes:

altering a resonance frequency, a capacitance, or other electrical property of a sensing element with the deactivation gas.

7. (Original) The method according to claim 1 wherein the deactivation gas includes hydrogen peroxide vapor.

8. (Original) The method according to claim 1 wherein introducing the deactivation gas includes:

vaporizing a liquid deactivation concentrate to generate the deactivation gas.

9. (Currently Amended) The method according to claim 8 wherein the vaporizing step is performed one or more of:

~~within HVAC systems for heating and cooling the space;~~

at a plurality of generators built into the space;

at portable generators movably placed within the space.

10. (Original) The method according to claim 2 further including: before introducing the deactivation gas, exhausting to bring the space at a negative pressure.

11. (Currently Amended) An apparatus for deactivating biological or chemical agents in a large volume space with a convoluted configuration, the apparatus comprising:

means for isolating the space;

means for concurrently introducing a deactivation gas into a plurality of subregions of the space, which subregions are ~~physically~~ interconnected and open to each other in such a meaner that air flows between the subregions;

means for circulating the deactivation gas within each subregion; [[and]]

means for circulating the deactivation gas from a subregion to its adjoining subregions;

means for sensing concentrations of the deactivation gas at a plurality of points around the isolated space;

based on the sensed concentrations, means for controlling the introducing of the deactivation gas, and the circulating of the deactivation gas from subregion to adjoining subregion such that the deactivation gas concentration in each of the subregions is maintained above a preselected minimum concentration and below a preselected maximum concentration; and,

means for controlling introduction and circulation of the deactivation gas until biological or chemical agents in the space are deactivated.

12. (Currently Amended) The method according to claim 1 further including:

~~with a multiplicity of sensors, sensing a concentration of the deactivation gas at a plurality of points around the space; and,~~

with a computer processor, controlling the introduction and circulation of the deactivation gas into and between the subregions such that [[its]] the concentration of the decontamination gas throughout the space is maintained above a preselected minimum concentration and below a preselected maximum concentration in each subregion.

13. (Currently Amended) The method as set forth in ~~claim 12~~ claim 1, wherein the preselected maximum concentration is a saturation or condensation concentration at the sensed temperature.

14. (Currently Amended) The ~~apparatus~~ method as set forth in ~~claim 12~~ claim 1, wherein ~~the means for~~ controlling the ~~introduction and circulation~~ circulating of the deactivation ~~agent includes means for~~ gas among the subregions is performed with a computer processing using flow dynamics modeling.

15. (Currently Amended) The ~~apparatus~~ method according to ~~claim 12~~ claim 19, wherein the deactivation gas includes hydrogen peroxide vapor.

16. (Currently Amended) The ~~apparatus~~ method according to ~~claim 12~~ claim 19, wherein ~~the means for~~ introducing the deactivation gas includes:

~~a vaporizer for~~ vaporizing a liquid deactivation concentrate to generate the deactivation gas.

17. (Currently Amended) The ~~apparatus~~ method according to ~~claim 8~~ claim 16, wherein the vaporizing step includes one of:

vaporizing the concentrate within an HVAC system for heating and cooling the space;

vaporizing the concentrate with a plurality of vaporizers built into the space;

vaporizing the concentrate in portable generators movably placed within the space.

18. (Currently Amended) The ~~apparatus~~ method according to ~~claim 12 further including: means for exhausting~~ claim 29, wherein the exhaust fans exhaust air, spent deactivation gas, and deactivation gas from the space[[;]], and further including:

~~a trap which traps any~~ trapping entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas.

19. (Currently Amended) [[The]] A method ~~according to claim 2, further including:~~ of deactivating biological or chemical agents in a large volume space with a convoluted configuration, the method comprising:

isolating the space;

introducing a deactivation gas into a plurality of subregions of the isolated space, which subregions are physically interconnected;

circulating the deactivation gas within each subregion and from subregion to adjoining subregions;

continuing to introduce and circulate the deactivation gas until any biological or chemical agents in the space are deactivated;

exhausting air, spent deactivation gas, and deactivation gas from the space;

trapping any entrained biological or chemical agent in the exhausted air, spent deactivation gas, and deactivation gas;

employing a plurality of exhaust fans for exhausting the air, spent deactivation gas, and deactivation gas at a plurality of locations within the isolated space; and

controlling the exhaust fans to control flow of the deactivation gas along and around the space.

20. (Previously Presented) The method according to claim 1, further including:

automatically closing doors to isolate the space from the environment before introducing the deactivation gas.

21. (Currently Amended) The method according to ~~claim 1~~ claim 14, wherein the space is an elongated space and includes multiple interconnected floors with a free flow of air between floors.

22. (Previously Presented) The method according to claim 21, wherein the space includes an airport concourse.

23. (Currently Amended) The method according to claim 21, wherein the space includes a wing of a building including corridors, individual offices or rooms, cubicles, or laboratories.

24. (Currently Amended) The method according to claim 21, wherein the [[air]] circulating step includes:

controlling a speed and orientation of a plurality of fans to move the deactivation gas between the subregions to maintain a concentration of the deactivation gas between a preselected minimum and a preselected maximum throughout the space.

25. (Currently Amended) The method as set forth in ~~claim 12~~ claim 14, wherein each of the sensors includes:

an electrical element whose electrical properties are altered in accordance with at least concentration of the deactivation gas.

26. (Currently Amended) The method according to ~~claim 3~~ claim 1, wherein the sensing step includes:

passing the decontamination gas over a coating on at least one surface of a piezoelectric resonator having a characteristic resonance frequency, which coating interacts with the deactivation gas and changes the resonance frequency of the resonator in accordance with a concentration of the deactivation gas;

determining the concentration [[o fthe]] of the deactivation gas from the changed resonance frequency.

27. (Withdrawn) The method according to claim 25 wherein the sensor includes:

a pair of capacitive plates between which deactivation gas is passed such that a dielectric constant of the space between the dielectric plates varies in accordance with a concentration of the deactivation gas.

28. (Previously Presented) The method according to claim 25 wherein the sensor includes:

a resonator whose resonance frequency changes in accordance with a concentration of the deactivation gas.

29. (Currently Amended) [[The]] A method ~~according to claim 1, further including:~~ of deactivating biological or chemical agents in a large volume space with a plurality of fluidly interconnected subregions among which subregions air flows freely, the method comprising:

isolating the space;

~~using~~ with a computer, ~~routine for~~ monitoring each of a plurality of deactivation gas concentration sensors around the space; [[and]]

with the computer, performing flow dynamic modeling routine;

with the computer, controlling deactivation gas generator[[s]] in accordance with the flow dynamics modeling routine to introduce a deactivation gas into the subregions;

with the computer, controlling exhaust fans in accordance with the flow dynamics modeling routine for drawing deactivation gas out of the space; [[, and a]]

with the computer, controlling circulation [[of]] fans to circulate the deactivation gas around the space and from subregion to subregion in accordance with the sensed deactivation gas concentrations and the dynamic flow modeling routine.

30. (Currently Amended) [[The]] A method ~~according to claim 29 further including with the~~ of deactivating biological or chemical agents in a large volume space with a convoluted configuration, the method comprising in response to a contamination event, with a computer routine:

closing portals into the space to seal the space from the surrounding environment;

introducing a deactivation gas into each of a plurality of subregions of the space, which subregions are physically interconnected such that air flows freely between the subregions;

circulating the deactivation gas between and within each subregion

controlling circulation of the deactivation gas and air from one subregion to adjoining subregions; and

continuing introducing and circulating the deactivation gas and air to deactivate the biological or chemical agents in the space.

31. (Currently Amended) A computer control system for controlling deactivation of biological and chemical agents in a large volume space with a convoluted configuration, the computer control system including a processor which is programmed to perform the method according to claim 1.

32. (Cancelled)

33. (New) A computer control system for controlling deactivation of biological and chemical agents in a large volume space with a convoluted configuration, the computer control system including a processor which is programmed to perform the method according to claim 19.